

# **Develop A Community Resilience Plan**

**Ch 1: Introduction**

**Ch 2: Form a Collaborative Planning Team**

**Ch 3: Understand the Situation**

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# Guide Overview

- The Community Resilience Planning Guide for Buildings and Infrastructure Systems helps communities:
  - Determine customized long-term resilience goals
  - Develop short and long term plans for their buildings and infrastructure systems to achieve resilience goals
  - Prioritize improvements to the built environment based on their role in supporting social institutions and economic functions during recovery
  - Address infrastructure dependencies and cascading effects of system failures



# Community Capitals

- Knowledge about each type of capital contributes to:
  - understanding the community's well-being
  - sustainable development and community resilience
  - disaster preparedness planning and investments



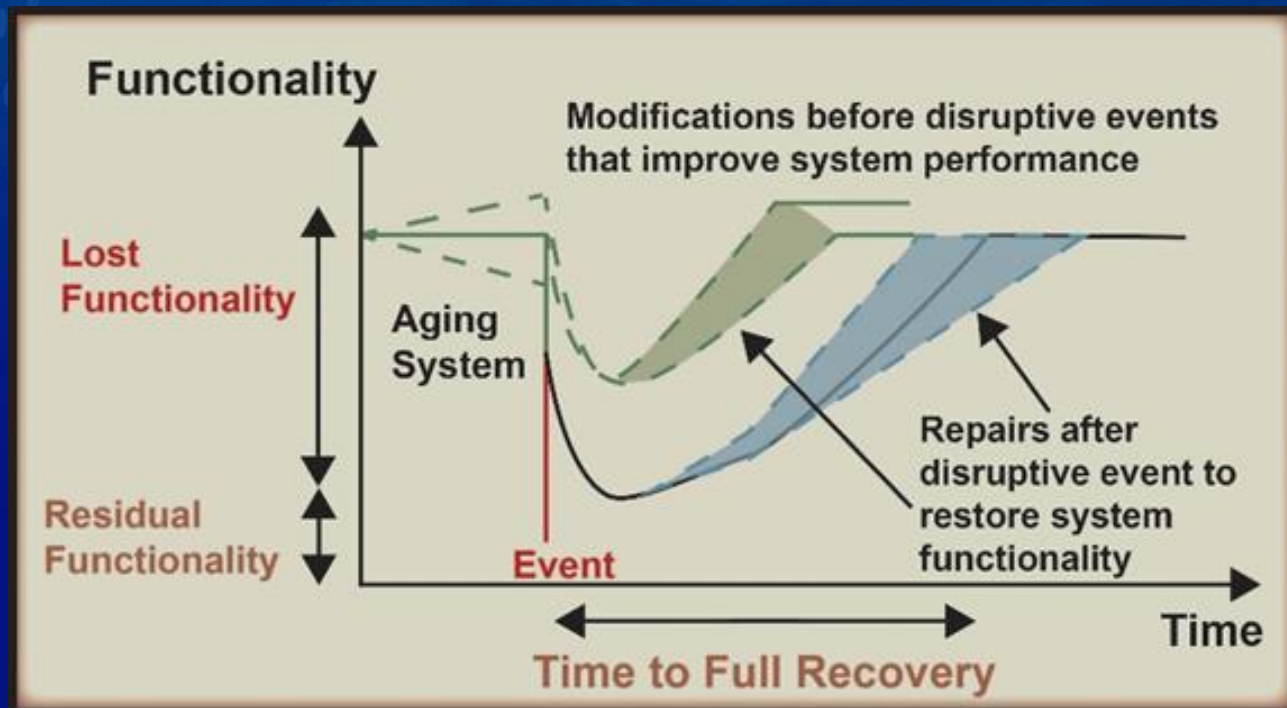
Adapted and redrawn, Flora et al 2008





# Resilience Concept

- Resilience can be expressed in terms of
  - system functionality
  - time to recover functionality following a disruptive hazard event



# Other Federal Activities Supporting Resilience

**National Preparedness Goal (NPG)** identifies core capabilities to strengthen the security and resiliency of the United States.

**National Planning Frameworks** – roles and responsibilities for 5 mission areas

**National Preparedness System** - guidance, programs, processes, and systems that support the NPG

## Disaster Preparedness

Prevention

Protection

Mitigation

Response

Recovery



**Resilience**



# Other Federal Activities

## Supporting Resilience (cont.)

### Critical Infrastructure Sectors

- Chemical
- Commercial Facilities
- Communications
- Critical Manufacturing
- Dams
- Defense Industrial Base
- Emergency Services
- Energy
- Financial Services
- Food and Agriculture
- Government Facilities
- Healthcare and Public Health
- Information Technology
- Nuclear Reactors, Materials, and Waste
- Transportation Systems
- Water and Wastewater Systems

**National Infrastructure Protection Plan (NIPP)** - critical infrastructure sector owners and operators collaborate to advance security and resilience

**FEMA Disaster Mitigation Assessment** - guidance for mitigation plans

**Threat and Hazard Identification and Risk Assessment (THIRA)** - helps communities map risks to core capabilities in the NPG



# Other Resilience Activities

- SPUR (2009) Framework
- Oregon Resilience Plan
- NOAA's Coastal Resilience Index
- Baseline Resilience Indicators for Communities (BRIC)
- Community and Regional Resilience Institute's (CARRI) Community Resilience System
- Communities Advancing Resilience Toolkit (CART)
- United Nations International Strategy for Disaster Reduction (UNISDR) Resilience Scorecard
- Rockefeller Foundation's 100 Resilient Cities Initiative





# Guide Scope and Limitations

Aspects of community resilience not addressed :

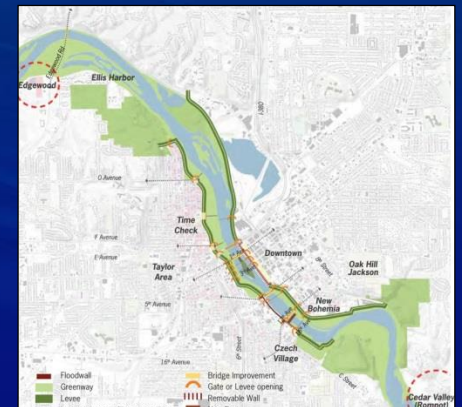
- Roles and responsibilities of public-private agencies
- Social, political and economic strategies or processes
- Methods of engaging and informing stakeholders and the community
- Methods of obtaining financial resources and evaluating investment options
- Specifics on community services (e.g., banking) essential for community response and recovery
- Specifics on vulnerable populations and ways they might be affected by a disaster event
- Natural resources and the environment



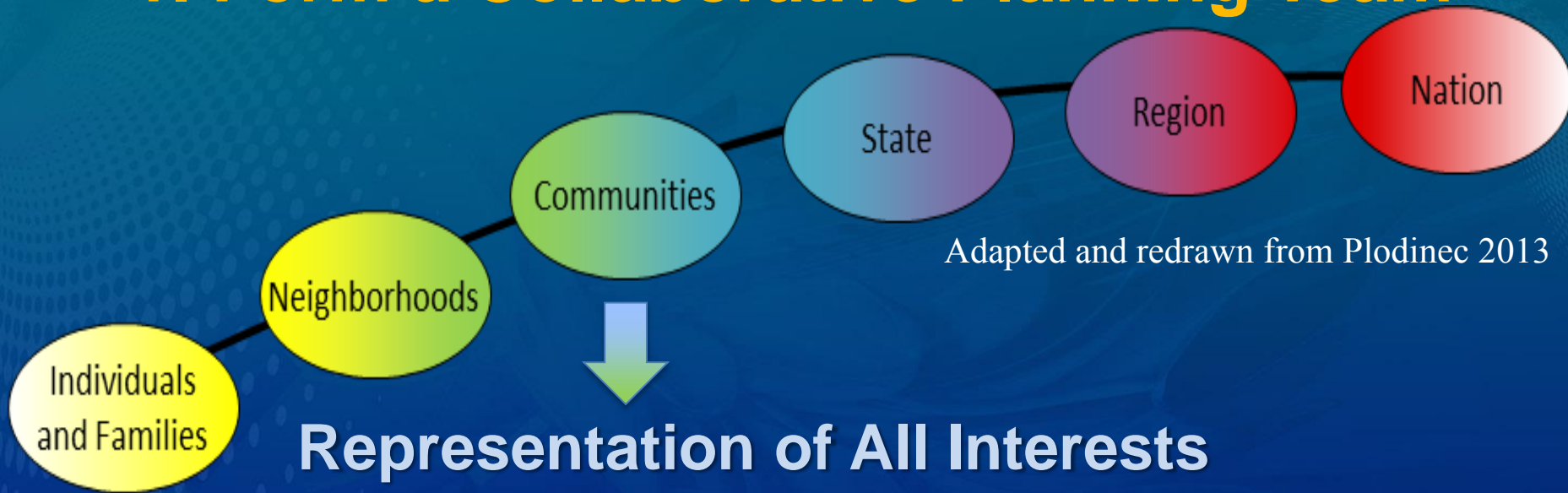


# Planning Steps for Community Resilience

1. Form a collaborative planning team
2. Understand the situation
  - Social Dimensions
  - Built Environment
3. Determine goals and objectives
4. Plan development
5. Plan preparation, review, and approval
6. Plan implementation and maintenance



# 1. Form a Collaborative Planning Team



## Public

- Elected Officials
  - Mayor, City Council
- Local Government
  - Planning & Building Dept, Public Works, Education, Human Services
- Community Members

## Private

- Business and Services
  - Banking, Utility providers, Health care, Media
- Organizations
  - Non-Governmental, Voluntary Org. Active in Disasters, Community Service



## 2. Understand the Situation

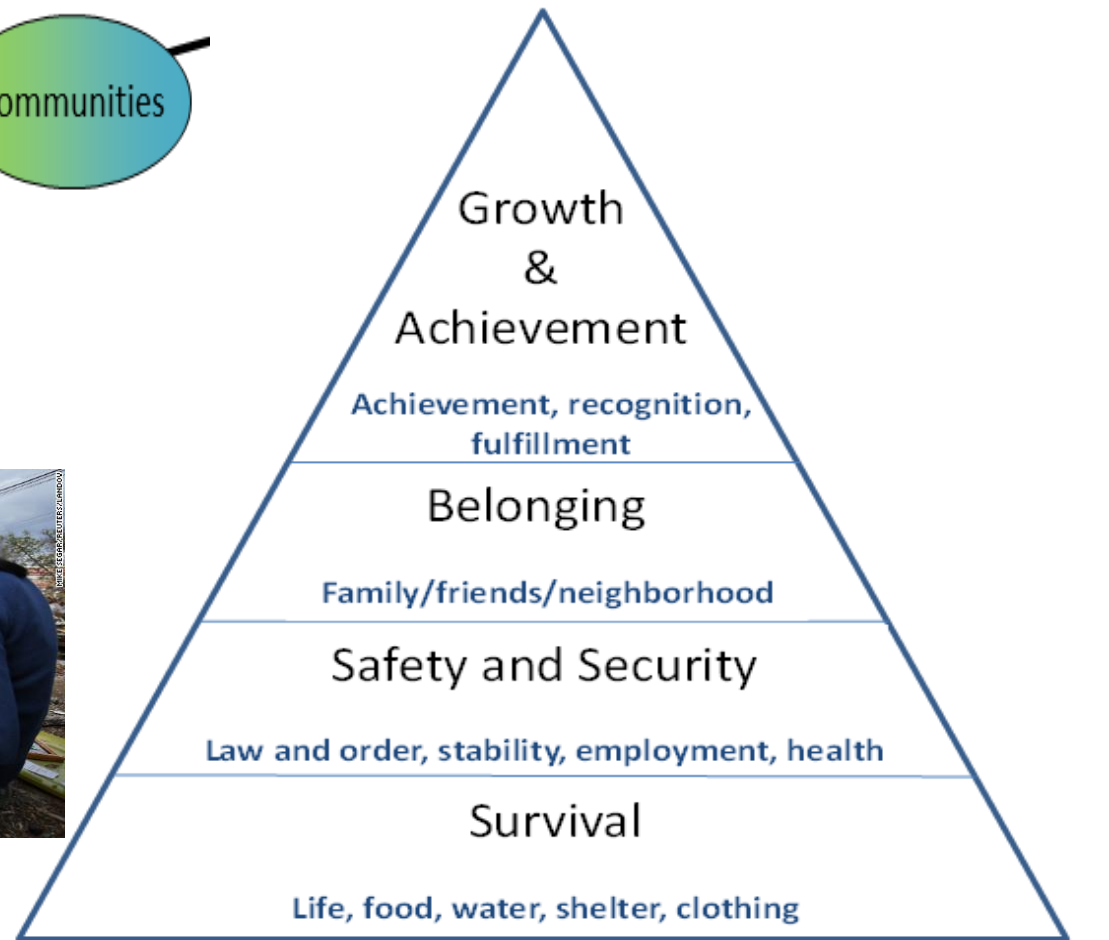
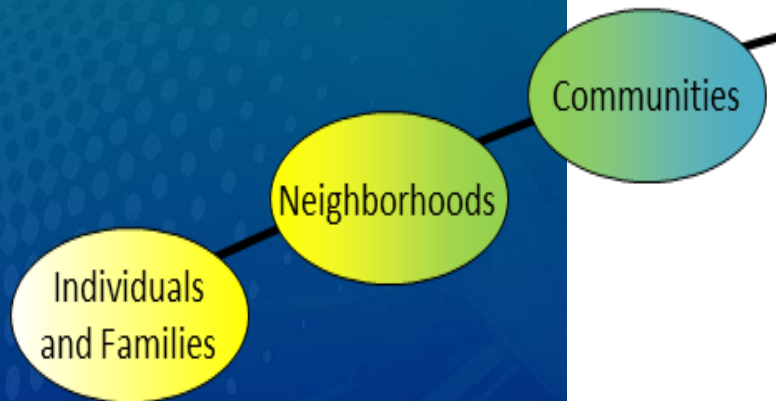
### Social Dimensions

- Identify and Characterize the Social Dimensions
  - Community Members
    - Present and future needs
    - Demographics
    - Economic Indicators
    - Social Vulnerabilities
  - Social Institutions, their functions, any gaps in capacity
  - Social Institution's dependencies
  - Community metrics





# Community Member Needs



Adapted from Maslow 1943



# Social Institutions that Meet Needs

Family and Kinship  
Government  
Education  
Religious and others

Economic  
Health  
Community Service  
Media

Identify:

- Services provided
- Gaps in capacity during recovery
- Dependence on one another
- Community metrics



# 2. Understand the Situation

## The Built Environment

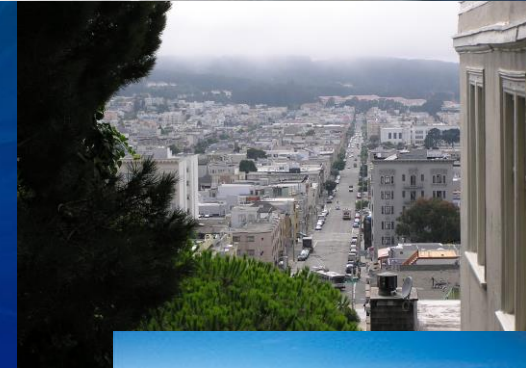
### Buildings

Individual structures including the equipment and contents that house people and support social institutions



### Building Clusters

A set of Buildings that serve a common function such as housing, healthcare, retail, etc.



### Infrastructure Systems

Physical networks and structures that support social institutions including transportation, energy, communications, water and waste water systems.



### Dependencies

Internal, External, Time, Space

### Characterize

Location, number, construction, demands and use, etc.





# 2. Understand the Situation

## Link Social Dimensions and Built Environment

Some rely more on the built environment



Emergency Rooms



Industrial Plants

Some functions change

Schools → Shelters



- Identify how services are supported
  - Services provided to meet needs
  - Dependency on other services and systems
  - Dependency on built environment
  - Consequences of loss

